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Medical Times

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The Journal of the
American Medical Profession



Procaine in Arsenical Extravasation
The Rh Factor • Plastic Surgery
Balneology in War • Miscellany
Cancer of the Breast VII
The Convention of Diseases

Medical Book News

Editorials

Contemporary Progress

Vol. 73

No. 6

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EDITORIALS

The Major Enemy

WE have seen how billions can be raised for war. The American Cancer Society's appeal for a fund of \$5,000,000 seems pathetic when such a meager sum for fighting an enemy of man much more implacable and enduring than the Nazis is compared with the enormous sums devoted to military aims.

Now that we have developed a technique for financing vast and necessary projects having to do with military matters, can we not have an equivalent, after the war, in the shape of a sharpened war on cancer? That war has already been declared and it only remains to finance and publicize it adequately. Make it front page news, with every research center a battlefield. In place of the crossing of the Rhine let there be some forward step in diagnosis or immunization, or some achievement comparable, say, in place of the reduction of Berlin, to the *Penicillium notatum's* effect on the *Staphylococcus aureus*. Here is one way of cushioning the letdown of peace, for it is a war that we would be substituting for a war.

Which numbers the more victims in the long run, war or cancer? Perhaps if man concentrates on the conquest of his most horrid and indeed major enemy he will find it more absorbing than mass murder or national suicide—unless he is really incapable of achieving a civilized stature, which we don't believe for a moment, despite the present state of the world.

Can we not, some day, have a Victory Loan that will indubitably prove our capacity for civilization?

On Looking Down One's Nose

SOME of us, we fear, are inclined to look down our noses at the practitioner



of half a century and more ago who struggled with such diseases as pernicious anemia, pneumonia and diabetes. But we suspect that such a spirit is not far from that of the author of a famous treatise on surgery that was much studied in the last years of the nineteenth century and who declared, in his introduction, that the science and art of surgery had about reached their highest

possible development.

Well, now comes Comroe (*J.A.M.A.* 127:392-396 (Feb. 17) 1945) and tells us that "Arthritis and allied conditions affect more persons in this country than the sum of all patients having tuberculosis, cancer, diabetes and heart disease." This leaves today's practitioner in no position to look down his nose at his professional predecessor of half a century and more ago.

And that older practitioner had something that was just as good as psychosomatic medicine. The only difference was that he had no "sixty-four dollar word" for it.

This has been all but forgotten, and until recently many professed to be mystified as to what was once meant by "the art of medicine," for anything apparently extrinsic to science smacked somewhat of charlatanry. The truth that the science and art of medicine constitute a functional unity is winning acceptance.

Lewis J. Moorman, in the March, 1944 issue of the *Journal of the Oklahoma State Medical Association*, has written a criticism of the magazine *Life's* naive notion, as revealed in a recent article, that psychosomatic medicine is something new, under the very suitable heading "Such is Life." When historic perspective threatens to spoil such an article as *Life's* we know what is likely to happen to it before publication; but to imply that a sense of

historic perspective exists at all in that quarter is perhaps to flatter *Life* unduly.

However, we have conceded in this editorial that sin and ignorance are not totally absent in our own ranks.

Polish Medicine

Medical men who wish Poland well in her political fortunes are naturally influenced by their knowledge of her great contributions to medicine and science in general all the way back to the founding of Cracow University in 1364. In the early days medicine was a part of scholarly culture, which accounts for the pre-eminence of physicians like the Pole Copernicus, who "set the earth in motion and stopped the sun." The use of Latin as a universal language also integrated scholarship and world intercollegiate relations.

Our familiarity with the great names of modern Polish medicine, despite their difficulty in pronunciation, is the best proof of Polish medicine's importance in relation to the whole structure of our science. Who does not know Babinski, Dietl, Mikulicz-Radecki, Casimir Funk, Curie, Brudzinski, Balinski, Mierzejewski, Bechtierew, Teichman, Szokalski, Galezowski, Chalubinski, Rajchman, Kostanecki, Sniadecki, Godlewski, Szymonowicz, Marchlewski, Cybulski, Keylin, Nowak, Bujwid, Weigl, Browicz, Parnas, Tur, Ciechanowski, Hornowski, Loth, Skubiszewski, Jurasz, and Jan Jachimowicz, of whom the last

named is now in New York. They are as familiar as Harvey and Mackenzie and Virchow.

The five great faculties, Warsaw, Cracow, Lwow, Poznan and Wilno have been closed for six years and the medical profession reduced about 75 per cent. The task of recreating these scientific and cultural forces is all the greater because of the very achievements of the past. But the Poles lack no faith in a still greater future, for the unique genius and natural virility of such a people will live forever and cannot be destroyed.

Going Our Way

Lewis Carroll, the author of *Alice in Wonderland*, thought that when 90 per cent of us were lunatics, the asylums would be put to their proper use—to shelter the sane.

We will know when the 90 per cent has been reached: "Railway collisions will be always happening; steamers always blowing up; most of the towns will be burnt down; most of the ships sunk." Most of the men will be killed "till at last there will be fewer lunatics than sane." Then the sane will come out and the lunatics will go in—"and things return to their normal condition."

It seems to us that Carroll's trick in *Alice in Wonderland* of letting in daylight on all sorts of human situations is discernible in the above quotations from another work of his.



Medical and Surgical Relief Committee of America

THE Medical and Surgical Relief Committee announces that for the six months period ending December 31, 1944, the Committee's donations to 21 countries, including the United States, amounted to \$43,669.87. The territory covered by the Medical and Surgical Relief Committee has increased as the number of liberated countries has increased, and contributions now reach France and Italy. United States tops the list of beneficiaries with \$16,386.48 worth of medical, surgical and dental supplies of which the U. S. Navy got \$3,542.13, the U. S. Army \$1,025.40,

and various civilian hospitals and welfare agencies the balance of \$11,818.95. The greatest number of shipments for this period went to China and India, while the most valuable single contributions amounting to \$4,951.76 went to L'Entre Aide Francaise for the relief of French children. The Medical and Surgical Relief Committee is distinguished by its adherence to two principles: 1. No authentic appeal is ever turned down, and 2. Medical aid is the only form in which aid is given. Contributions of medical, surgical and dental supplies and instruments will soon reach the \$700,000 mark. The exact figure to date is \$690,715.60.

PROCAINE IN THE TREATMENT OF ACCIDENTAL ARSENICAL EXTRAVASATION PAIN

Jose A. Garcia, M.D.

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A REVIEW of two of the leading textbooks reveals little space devoted to the treatment of accidental perivascular arsenical infiltration or extravasation. Howles (1) simply mentions hot or cold compresses. Stokes, Beerman, and Ingraham (2) are more specific and go more into detail, suggesting first cold compresses, then hot compresses after 24 hours, and the injection of that old standby locally or intravenously, sodium thiosulfate, if there is much edema or if necrosis threatens.

A Critique of the Standard Treatment

I SHALL not discuss the chemical rationale of the treatment of arsenical extravasation into involved areas by means of various agents. MacDonough in 1916 recommended a sulfur preparation to neutralize the effects of the arsenicals. McBride and Dennie in 1923 were the first to recommend the use of sodium thiosulfate. The efficacy of sodium thiosulfate is a moot question from a theoretical standpoint; I have found in a limited number of cases that sodium thiosulfate is of no immediate value in relieving the pain which is the most immediate and embarrassing problem in the accidental infiltration of the arsenicals. I hereby grant that once the arsenical (I use mostly mapharsen and occasionally neosarsphenamine) is spilled extravasously, the injection of procaine hydrochloride with epinephrine into the infiltrated area may not alter the chemical process of irritation and reaction—but the pain is relieved immediately. Heretofore, before the present treatment was tried, I usually recommended the following treatment:

1. Cold or hot compresses. Some of the patients complained that if hot compresses were given first, their pain became worse. Thus I instructed them to use cold compresses, if they did not get immediate relief. Then I recommended that they change over to hot compresses.

2. If the site of extravasation was large

—which usually doesn't occur, unless the area is very deep, or unless the patient is an obese patient and one can't see the swelling mass—sodium thiosulfate was injected into the area of infiltration. This usually did not relieve the patient at all—and often they complained of worse pain.

3. Codeine in $\frac{1}{2}$ grain doses and aspirin in 5 grains doses to be given every hour or two for about twelve hours was also recommended. Although the codeine and aspirin relieved them somewhat, the first twelve hours were always very painful, and the patients complained constantly and bitterly. I always give codeine and aspirin—I believe we are too prone to minimize the pain that the patient complains of. But it is so severe that often they do not continue with their treatment.

An Analysis of the Procaine Treatment

BEING dissatisfied with the standard treatment of arsenical accidental extravasation, the following treatment was adopted. The results are gratifying and the relief of the pain is immediate. I have been using the treatment for two years.

1. As soon as there are evidences of perivascular infiltration of the arsenical, either by the patient complaining of pain at the site of injection or by seeing the skin becoming puffed up at the area of injection, the needle is withdrawn and between 2 to 10 cc. of a 2 per cent solution of procaine hydrochloride with epinephrine 1:25,000 is injected into the infiltrated area. A small hypodermic needle is used, either $\frac{1}{2}$ inch or $\frac{3}{4}$ of an inch long, size 25. Care must be taken to see that one is not injecting in a vein. The pain ceases in about 3 to 5 minutes (average amount of procaine injected is about 4 cc.).

2. The patient is given codeine phosphate $\frac{1}{2}$ grain and 5 grains of aspirin, in capsule, to be taken every hour or two. Only about six or eight capsules are prescribed.

3. As a rule this is sufficient. However, the patient is instructed to return at two-hour intervals if the pain returns at the wearing off of the previous procaine injection. Depending on the pain sensitivity of the patient or the amount

of arsenical extravasated—the patient returns accordingly. Most of the patients require only one injection, but some require another injection at the end of two hours.

4. No hot compresses are applied since the skin area is anesthetized and the patient cannot properly evaluate gradations of heat and may suffer a burn. Cold compresses may be used.

Summary and Conclusions

1. A new treatment for the relief of pain due to the accidental perivascular extravasation of the arsenicals consisting of the injection of a 2 per cent solution of

procaine hydrochloride with epinephrine into the infiltrated area is presented. Injections to be repeated at two-hour intervals if necessary.

2. This treatment is very gratifying and the pain is relieved immediately and thereafter controlled.

3. Previously with the old treatment and sodium thiosulfate, not even morphine would control adequately the initial pain which is severest during the first twelve hours.

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THE Rh FACTOR IN PREGNANCY AND THE NEWBORN

Cameron Duncan, M.D., F.A.C.S.

Brooklyn, N. Y.

SINCE Landsteiner and Wiener discovered the Rh factor, there have been many articles written on this subject. Time does not permit me to go into all the discussion of the subdivisions of the Rh factor and the different blood groups that give rise to hemolytic anemia of the newborn. These authorities agree that 85 per cent of the white population are Rh+ and 15 per cent are Rh—. When the Rh+ father and an Rh— mother have a child, the child is Rh+, but becomes sensitized by the mother's agglutinins as a certain amount of the fetal blood circulates through the placenta into the mother's blood, which, being sensitized and carried into the fetal circulation, acts on the fetus causing a hemolytic anemia. Hydrops fetalis, icterus gravis neonatorum and acute hemolytic anemia of the new born in 93 per cent of the cases are due to the difference in the Rh factor in the mother and child.

AS has been stated many times before, if the mother is unusually sensitive to the Rh+ factor, the pregnancy may result in early abortion or premature still-birth due to hemolysis of the infant's blood before the pregnancy has reached term. If the Rh— mother is not unusually sensitive, then the pregnancy will reach term and an apparently normal

infant will be delivered. This newborn may appear normal for the first few days of its life. When it is noted that the hemoglobin and red cell count are rapidly dropping, it may be taken for granted that there is a difference in the Rh factor of the mother and infant. An early test for the Rh factor on the infant and mother shows the discrepancy of the Rh negative mother and Rh+ child. The agglutinins which have been transmitted from the mother may circulate in the infant's blood and be stored in the infant's tissues. These may be drawn into the circulation after birth and cause a hemolysis of its Rh+ red cells. The early treatment of the hemolytic anemia of the newborn is by transfusion, preferably with an Rh— donor, or if there is difficulty in finding a suitable donor, it is best to transfuse the infant with washed red cells of the mother's blood.

The washing of the red cells of the mother's blood is not too difficult a procedure to carry out if one has a centrifuge and test tubes to separate the red cells of the mother's blood from the plasma. By centrifuging the mother's blood, siphoning off the plasma, adding an equal quantity of normal saline solution to the plasma withdrawn, shaking the mixture up and recentrifuging, drawing off the saline and adding an equal quantity of saline to that drawn off, the mixture has then eliminated the mother's plasma, which contains most of the agglutinins to the Rh+ baby's blood, and

this red-cell suspension of the mother's blood is transfused into the infant. If 100 cc. of the mother's blood are drawn and 50 cc. are used at the first transfusion, and the remaining 50 cc. are transfused the next day, this will probably be sufficient to eliminate the progress of the hemolytic agglutinins, and the baby can go on on its own thereafter. If the anemia continues to develop, by that time, probably, an Rh negative donor can be obtained. If not, the baby should be transfused again with more washed red cells from the mother. If the newborn infant shows bleeding from its mucous surfaces or intestinal tract, the use of vitamin "K" is of no therapeutic value. It would then be better to give stock plasma as the plasma contains numerous blood platelets and fibrinogen. In case of icterus gravis neonatorum appearing within the first 24-48 hours after birth, the Rh factor should be immediately investigated and, if there is a discrepancy, we should employ transfusion as described and alkalization to destroy the acid hemoglobin residue which blocks the kidney tubules and which is readily dissolved by the use of sodium citrate. The ordinary 2½ per cent solution is used, grading the dose according to weight and age, using 50 cc. of 2½ per cent solution of sodium citrate as an adult dose. These 50 cc. ampules we all have for citrating blood for ordinary transfusions.

TRANSFUSION from an Rh+ father to a newborn Rh+ infant with an Rh- mother is like adding fuel to the fire because the father's red cells are immediately hemolyzed and give more acid hemoglobin deposits in the infant's kidney tubules.

If a history of the mother's previous babies shows that they have had marked icterus, that should lead one to investigate the Rh factors if icterus appears early in this newborn infant and, if the Rh discrepancy is found, immediate treatment should be instituted.

The reactions and deaths of mothers with Rh- blood from Rh+ donors have been reported in numerous articles in literature. But if this mistake should be made and an anuria develops following transfusion, alkalize the mother by giving the full 50 cc. dose of 2½ per cent sodium citrate solution intravenously and, if the anuria continues or the small amount of urine eliminated is not markedly alkaline within four hours, the

sodium citrate should be repeated. Some authorities have advocated alkalization of the patient before transfusion.

Alkalinization may be done with the intravenous use of molar sodium lactate (racemic) solution using a 40 cc. ampule diluted with 200 cc. of distilled water or by the use of Hartmann's sodium lactate solution which comes in 500 cc. stock bottles, or it may be done by giving 2 per cent sodium bicarbonate solution intravenously, but the sodium citrate solution always being available, it is probably quicker and more certain in its action than any of these mixtures.

Where the Rh- mother has had a transfusion from an Rh+ donor, even in her early years of life, she may be so sensitized to this Rh+ factor that her first pregnancy will be a failure for the infant, as in a case recently reported by Lubinski.¹ It is therefore important as advocated by Levine² that all females from infancy on through the childbearing period should have the Rh factor test before transfusion and if it is found that the patient is an Rh-, she must not be transfused with Rh+ blood.

I WILL briefly report five cases that have occurred in this institution — three multiparae and two primiparae.

M. C., aged 36, Para IV, Gravida V, due Feb. 15, 1939—delivered December 12, 1938. She had had four previous full-term pregnancies, the third being a twin pregnancy, one twin dying about 14 days after delivery of unknown cause and the other twin developing into a deaf mute. The other three children were perfectly normal. In the last pregnancy, the mother was admitted with vaginal bleeding, marked edema of the lower extremities and the abdomen larger than normal for this period of gestation. She delivered a hydrops fetus weighing 5 lbs. 5 oz. with megaloplasenta. The autopsy on the baby showed erythroblastosis. This was before the Rh factor was known. Later blood tests showed the mother to be Rh- and the father Rh+.

J. L., aged 35, Para III, Gravida IV, due Feb. 29, 1941—delivered, normal spontaneous birth, March 4, 1941, a living female weighing 7 lbs. 3 oz. On March 11, the infant's hemoglobin showed 35 per cent, RBC 2.05 million; on March 13, hemoglobin was 25 per cent, RBC 1.55 million. She was transfused on March 13 with 50 cc. of mother's whole blood, same repeated on March 14th. On March 17th, 15 cc. of blood, March 20, 50 cc. and March 28, 50 cc. from an untested Rh donor. April 1 55 cc. from the same donor. April 3, 10 cc. This infant was brought back to the hospital several months afterwards and a blood study was made and found to be perfectly normal.

L. L., 26 years of age, para III, Gravida V. Three full-term spontaneous deliveries of living babies, 9½ lbs., 7 lbs., and 7 lbs. 7 oz. children, all of which lived. Her fourth pregnancy was a spontaneous abortion; her fifth pregnancy was three weeks premature of a stillborn infant. Blood from the baby's heart was Rh+; the mother was Rh- and the father Rh+.

M. M., aged 33 years, primipara, was delivered at approximately 7 months gestation. She was a known

case of tuberculosis under treatment; she had had an artificial pneumothorax. A polyhydramnios complicated pregnancy. She was delivered of a living premature male weighing 3 lbs. 8 oz. which died 30 minutes after delivery. She was Rh— and the husband Rh+.

L. A., 20 years old, primipara, due Sept. 13, 1944. Delivered August 9, 1944: hydrops fetalis, clubbed feet, malformation of hands, spina bifida; died in 30 minutes. Blood drawn from the baby's heart was Rh+; the mother was Rh—. The father, being overseas in the Service, could not have the blood tested for the Rh factor.

MOST of the Rh discrepancies are found in multiparae with a history

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Read before the Scientific Session of the Associated Physicians of Long Island, held January 27th, 1945, at St. John's Hospital, Brooklyn, N. Y.

of having had living babies. These mothers have gradually become sensitized to the Rh factor by several pregnancies and with an Rh+ baby succumb to the Rh— agglutinins. Where it occurs in the primiparae, the expectancy is repeated abortions or stillbirths. It has been suggested that where this condition exists, artificial insemination by an Rh— donor is the only hope for these mothers to have living children.

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162 OCEAN AVENUE

INDICATIONS FOR PLASTIC SURGERY

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TODAY the indications for plastic surgery are legion.

To classify the needs for these reconstructive procedures, the following scheme is presented:

I. Anatomic II. Economic III. Functional IV. Psychologic V. Personal.

Cyst—I.

Hemangioma—I.

Scar—Disfiguring II; Contracting III; V

Congenital malformations:

Webbed fingers—I.

Cleft lips & palates, II; III; IV

Noses—II; IV; V

Breasts—II; IV; V

Pendulous Abdomens—II; III; IV; V.

TO describe these indications in more detail, a case may fall in one or more of several categories; for example: A contracting scar may cause a distortion of certain parts of the anatomy and be presented for correction; it may also be an economic handicap by causing a functional disturbance and because of its unsightly appearance may produce a psychological reason for its revision.

Another case may be cited which seeks correction for purely personal reasons, such as outstanding ears. These people, young or old, are entitled to the benefits and advantages which are now available through the application of plastic and reconstructive surgery.



Fig. 1
Psychological

Between these two extremes, many conditions, formerly considered inoperable or for which there was no solution of the patient's dilemma available, are now amenable to revision and correction.

A partial list of these conditions follows:

SCARS:

From burns, accidents or keloid.

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Fig. 2
Economic

TUMORS:

Moles, hemangiomas, lymphangiomas or cysts.

Radium has caused some disastrous results and x-ray in lymphangiomas (as well as sclerosing agents) is of doubtful value.

EYE:

Entropion

Ectropion

Symblepharon

Loss of eyebrows

Reconstruction of the orbit



Fig. 3

Immediate operation, functional and anatomic

NOSE:

Hump

Hook

Saddle

Bulbous tip

Loss of alae or absence of entire nose

Fig. 4

Functional (Interfered with motion of lid and sight)



CONGENITAL DEFORMITIES:

Cleft palate

Harelip

Receding chin

Double chin

Webbed fingers

Fused hand

Microtia

Outstanding ears



Fig. 5

Functional, Anatomic, Economic

ACQUIRED DEFORMITIES:

Pendulous breasts

Pendulous abdomen

Dupuytren's contraction

Chronic dislocation of acromioclavicular joint

Ulcers, varicose or indolent

Defects following removal of malignant tumors or carbuncles

Avulsion of Scalp

Burns and their sequelae

Nerve and tendon repair

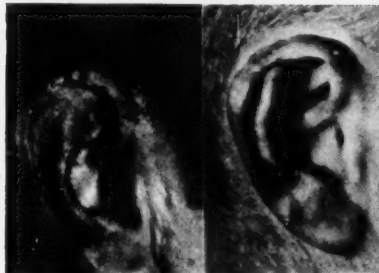


Fig. 6

Economic

Many of these cases, in fact most of them, are ones of election and not of immediate necessity, so that a plan may be prepared and the patient properly fortified.



Fig. 7
Anatomic and functional

Acute burns and accident cases should be seen by the plastic surgeon early, so that treatment may be mapped out with the cooperation of other branches of the service, such as the dentist, the medical men, the psychiatrist if necessary and, of course, the x-ray and laboratory personnel.

We are often called to see a patient who has suffered long and, because of the initial condition and interminable and painful dressings, is in no immediate condition to withstand extensive surgery. We may advise further preparatory treatment and be criticized and urged to hurry our procedures. Unless you think it be the opportune time—DON'T DO IT! Failure will only delay the ultimate result and if one yields to the temptation, against his better judgment, he may contribute to

this failure and to the possible loss of a patient who, probably, deserved a better fate.

The introduction of new methods and technics, such as plasma-thrombin "suture" to encourage the adhesion of skin grafts, the transparent dressing for grafts, the grille graft, the preservation of cadaver

Fig 8
Economic



cartilage and nerve tissue, and the accurate calculation of thickness of split skin for transfer, has increased our confidence in many doubtful procedures and added many phases to the indications for plastic and reconstructive surgery.

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Major Walker Promoted

MAJOR Douglass W. Walker, MC., Executive Officer, Preventive Medicine Service, Office of The Surgeon General, has been promoted to the rank of Lieutenant Colonel.

Far East Medical Civil Affairs School

TWENTY-TWO Medical Department officers were enrolled in the second class of medical civil affairs officers for the Far East which began training recently at the School of Military Government, Charlottesville, Va.

BALNEOLOGY

BALNEOLOGY IN THE U.S.S.R. AND WAR

Charles L. Rubenstein, M.D.

San Francisco, California

FROM the very beginning of this patriotic war, Soviet medicine has made extensive use of its health resorts. Never in the history of medicine has balneology played such a dominant role in the treatment of war casualties as it does today. Ever since the fall of the old régime and its decadent Russian system the attention of the Soviet government has been directed toward rehabilitation of the health of the nation, and particularly the underprivileged, whose cultural and spiritual aspirations had been suppressed previously by the ruling class. A system of new universities, hospitals, sanatoria, day and night dispensaries, various research institutions, rest homes, day and night nursing homes, etc., have been erected all over the vast country, with its population of over one hundred ninety-five million, in places where surroundings and climatic conditions were most favorable. Some of the numerous palaces on the Crimean peninsula, which formerly belonged to the Czar and his followers, were remodeled and converted into sanatoria. The old type institution, dedicated to the treatment of obesity and alcoholic neuritis, has vanished. In its place health resorts, designed for the benefit of all the people, have been erected.

When the war started, the government, the research worker, and the medical man engaged themselves in new problems to determine how great a contribution Mother Nature could offer to the war efforts in a country which was bled white from the Nazi invasion. With the number of casualties constantly increasing, it was essential to expedite the recovery of the disabled, whose first aim was to rush back to the front and finish the job. It is for this reason that a series of research institutions have been established in the capitals and at the resorts proper for the advanced study of balneology.

THE curative properties of natural mineral springs on war wounds were

first employed with casualties in skirmishes with Japan. Then the observations were continued on the wounded in the war with Finland. Since then, medical research has proved conclusively that natural mineral springs have great potential healing power, not only in cases more or less recovered from their injuries, but also in fresh cases. Moreover, it has been proved that, when applied at the earliest possible date and in combination with other methods of surgical and orthopedic treatments and other interventions, balneology shows its maximum efficiency. Observation carried out at Pyatigorsk showed that radioactive mud facilitates the mending of injured bones, and when applied soon after an operation it leads to rapid healing of the wound and the formation of a strong scab. Its beneficial effect has been particularly noticeable in the treatment of injuries to bones, nerve trunks and cords. What constitutes the therapeutic effect of natural mineral springs is still a matter of careful study.

SOVIET research workers maintain that the main factors which stimulate the processes of regeneration in injuries are brought about by absorption of autolytic products. This phenomenon gives rise to new agents formed which in turn act as stimulators to healing processes. Various authors have given them different names, as, for example: necrohormones, lysates, sympathomimetins, metabolites, etc.

These theories, which were developed several years ago, are of great interest, since they fall into line with Menkin's latest studies of the biochemical and morphologic changes that take place in injuries. In short, Menkin states that any cell disruption in injuries gives rise to substances which initiate the process of inflammation. The substances formed have been so far identified as leukotaxine, necrosin and a leucocytosis-promoting factor. Most probably all of them participate in stimulation of the reparative processes. It has been found that some chemicals contained in some natural mineral springs have proved to be stimulators

to the healing processes. This is also true of some of the springs known for their radioactivity, the emanation of which behaves in the same manner.

To the writer, it seems that the beneficial effect of natural mineral springs lies primarily in the influence of the hydrogen-ion concentration. We know that highly infected wounds develop a hydrogen-ion concentration below pH6. The retarding factor in wound healing is caused in part by the high hydrogen-ion concentration of pus. The natural mineral springs, applied externally and internally, soothe the inflammatory reaction, affording rest to the injured and inflamed tissues. The chemicals, such as calcium, strontium, etc., decrease the hydrogen-ion concentration, removing the inhibitory effect of the wound repair in the presence of infection and exercising their protective and therapeutic effects. Further, the alkalinity of the medicinal waters, as influenced, for instance, by calcium-ions, stimulates phagocytic activity.

HYDROTHERAPY is still in its infancy in the United States. In this connection, it is interesting to note the statement made by Dr. Hans J. Behrend, of New York University and the Hospital for Joint Diseases, at the 22nd annual meeting of the American Congress of Physical Therapy. Dr. Behrend stated that hydrotherapy, in meeting the demand of the war, "may be useful in treating both the mild neuroses and the serious nervous damage which will result from the war." Hydrotherapy in general was discussed at the Congress merely as a factor in relieving pain in arthritis, sciatica, bursitis, and other similar conditions.

Recently Bernard Baruch, seventy-three year old adviser to the Presidents, has given a large bequest to establish an institution which will be devoted entirely to study and research in the field of physical therapy. Dr. Ray Lyman Wilbur, former president of Stanford University, was named to carry out the plan. It is interesting to note that Bernard Baruch attributes his good health to hydrotherapy.

The United States possesses a wealth of natural mineral springs scattered all over this vast country, and these are especially abundant in the State of California. These springs could be advantageously used in the treatment of war casu-

alties, as well as in augmenting the health and well-being of the nation generally.

Dr. Kress, in his excellent article, "Injured Soldiers, Sailors and Airmen," has fully stressed the possibilities the State of California can offer in this war to expedite the recovery of war casualties and relieve the congestion of hospitals. The writer was also impressed with the frank statements made by the leading men of Saratoga Springs, Dr. Walter S. McClellan and Dr. Oskar Baudisch, who admitted that natural mineral springs are still not very highly esteemed in this country. This is all the more reason why full credit should be given to the Soviet medicine that worked out certain fundamental principles in applying balneotherapy in the treatment of war casualties. These observations, based upon scientific research, have been accepted as leading to the best method for facilitating treatment of a large number of casualties in the shortest time.

IT has been brought to my attention that hydrotherapy is now extensively and successfully used in conjunction with kumiss therapy, for which purpose kumiss sanatoria have been erected in Caucasia. I had experience with kumiss therapy at Shafranovo where I served in the capacity of consultant physician. What is kumiss? It is a fermentation product of mare's milk, which by itself is not a tasteful beverage and is not easily digested, but by fermentation is converted into a nourishing and easily digested drink. The stomach tolerates kumiss well, even when it rejects all other food. The use of kumiss originated in Russia centuries ago and is still strongly advocated there by physicians and public opinion as an almost specific treatment for pulmonary tuberculosis.

The main difference between mare's milk and cow's milk is that the former is richer in carbohydrates, approaching quantitatively human milk. The large quantity of lactose, under the combined action of the kumiss bacillus and yeast, produces a quick fermentation of the milk and forms alcohol, carbon dioxide, lactic acid and by-products in small amounts.

Kumiss is rich in vitamin C. It is interesting to note that the vitamin C content of all milk is variable and is usually destroyed in pasteurization or boiling.

The figures given by A. Cimmino show

that the ascorbic acid content of milk averages:

- 27 mg. for women per liter
- 20 mg. for cows per liter
- 45 mg. for goats per liter
- 72 mg. for asses per liter
- 95 mg. for mares per liter

The ration, season of the year, and the breed of the animals have only a slight influence on the quantity of ascorbic acid in their milk. Rabbits fed exclusively on green alfalfa still show little or no ascorbic acid content.

The most encouraging results were obtained from the use of hydrotherapy supplemented with kumiss. No doubt the good results are due to the fact that in kumiss we have a happy combination of all the fundamental food elements. It contains proteins, carbohydrates and fats in a highly digestible form, and also vitamin C and mineral salts. It is well known that proper diet is always essential in maintaining the vigor of fighting forces against the stress of war. However, it becomes a much more important factor in the recovery of those disabled. The slightest diminution of the individual resistance is immediately reflected in the healing process of injuries. Numerous experiments have shown that if plasma proteins are reduced in amount, wound healing is retarded. Diet especially rich in vitamin C, a most important vitamin in the repair of wounds, is now widely used in all health resorts of the U.S.S.R. In fact, vitamin C is given soldiers at the front. It has been proved that this vitamin tends to prevent shock in the wounded. Experiments on guinea pigs have proved conclusively that vitamin C is an essential factor in healing, not only of the soft tissue, but also in the proper healing of the bone. As far back as 1923, Ishido found considerable delay in the healing of experimental wounds in scorbutic guinea pigs. Bourne has shown that healing of fractured bone calls for more vitamin C than the animal is able to manufacture. Gould and Schwachman suggest that vitamin C may play some part in the utilization of calcium by means of its effect on the phosphatase system of bone. As previously stated, excellent results have followed from the combined use of hydrotherapy and kumiss therapy. Healing was more rapid. It was always followed by increase in muscular tone and hemoglobin. The increase in weight was

of a more permanent nature than that obtained by the usual sanatorium diet.

Before the war kumiss sanatoria were located only in the Russian steppes. The climate, similar to that of Southern California, Arizona and New Mexico, favored an increased consumption of the beverage. Subsequently, the Government has erected kumiss sanatoria in Caucasia because the health resort institutions have recognized in kumiss a potential factor which, when supplemented with hydrotherapy, becomes a most powerful weapon in expediting recovery of the wounded.

IN a previous article I mentioned that within the past year a number of health resorts have created hospitals of special type, so-called hospital sanatoria, thoroughly modernized and adapted for any form of treatment. They are dedicated to patients convalescing from heavy losses of blood and serious wounds or operations. Some forms of spa treatment, as for example radioactive mud and fango packs, are transported in airplanes to the front, and to the first or second line field hospitals, for the use of those who cannot be transported to the resorts. The doctors in charge of spa procedures are those who have had special training and experience at the resorts proper. As a rule, war casualties which show slow progress after they have been treated in base hospitals are sent to the resorts according to their individual need.

THERE is no question but that the war has speeded up medical science. Especially is it true in the balneology domain of physical therapy. This science, beyond the smoke of battle, has continued to progress until it has proved that hydrotherapy is a most conspicuous healing factor in the handling of war casualties. The latest reports show that 85 per cent of the wounded return to the front, in comparison with 40 per cent during the last war. This progress has been achieved through the specialization of hospitals and mass applications of physical therapy in which balneotherapy plays a substantial role. Here is a very striking comparison. In the last war amputations were done in about 8 per cent, and now in this mechanized warfare, in spite of the use of the most modern weapons of war, amputations have been limited to hardly two-thirds of one per cent.

The value of these springs must be emphasized not only as a wartime expediency, but also for their effect in retarding the handicaps of advancing old age.

IN conclusion I wish to endorse the plea made by Dr. Henry E. Sigerist, a member of the Johns Hopkins University, in the *Bulletin of the History of Medicine* of February 19, 1942, and by Dr. Kress, the editor of *California and Western Medicine*, and others for the further development of our health resorts. I realize that it will be necessary to carry on an educational campaign during which the medical profession and the public at large must be made more mineral springs-conscious.

The enormous research work done in Soviet Russia in the field of balneology and the role it has played in the heroic and successful struggle of the Russian

fighting forces for the final destruction of Hitlerism are tangible evidence of the great contribution made by Soviet science. The spas in Soviet Russia are a national asset, not only for the treatment of war casualties, but also because of their comprehensive program for the treatment of casualties in the postwar period. It would be an excellent plan for our Government and our medical profession to send a committee of physical therapists and research workers to Russian spas to acquaint themselves with the latest discoveries and practical applications of hydrotherapy based upon experimental research and sound medical and scientific principles, and also to acquaint themselves with all the facilities these spas offer in the general program for postwar rehabilitation of disabled soldiers.

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450 SUTTER STREET.

MISCELLANY

Perhaps We Should Revive the Thesis

Theses for the medical degree at Paris, with their respective dates:

1589. Is the air more necessary than food and drink?

1622. Is water more wholesome than wine?

1639. Should a girl mad with love be bled?

1643. Is it of advantage to get drunk once a month?

1648. Are pretty women more prolific than others?

1669. Is woman lewder than man?

1720. Is a woman the more prolific the lewder she is?

—Are We Civilized? by Robert H.

Lowie; Harcourt, Brace and Company, 1929.

Medical Wisdom and Wit, Spanish Style

If you have a cold untreated, it will last a month; call a doctor, and it will take thirty days.

—Spanish Proverb

The Doctor's Bill

One of these public opinion polls comes up with the report that many Americans believe that a system ought to be devised to make it easier to pay doctors' bills. The many who think so doubtless include some doctors.—*New York Sun*.

CULTURAL MEDICINE

THE CONVENTION OF DISEASES

WE attended one of the great national gatherings of the profession recently and took in all the sessions that we could. So surfeited did we become with the interminable talk that one afternoon, as some estimable gentleman proclaimed the virtues of penicillin in somnifacient monotone, we slipped down a plane or two from the conscious, and suddenly found ourselves in a convention of diseases.

Here, strange to say, we found the usual conditions completely reversed. The diseases were discussing the medical profession, its aims and methods and results, as well as the possibilities held by the future both for physicians and diseases.

The convention hall was crowded with diseases and bacterial proxies. Most of the diseases gave a venerable impression, but here and there flashy young diseases, like erythroblastosis, were to be seen. The Big Three of the disease underworld dominated the proceedings; Tuberculosis presided, with Cancer and Syphilis occupying places of honor on the dais. Flitting about the hall we observed many Cohnheim cells with metastasis licenses conspicuously displayed. Syphilis wore a curiously designed robe, which upon close inspection we saw bore side-chain figures, woven out of amboceptors and complements. Acting as a kind of chief usher, or master of ceremonies, was Alcoholism, who seemed to be popular with everybody. The greetings between Alcoholism and Optic Neuritis were particularly effusive.

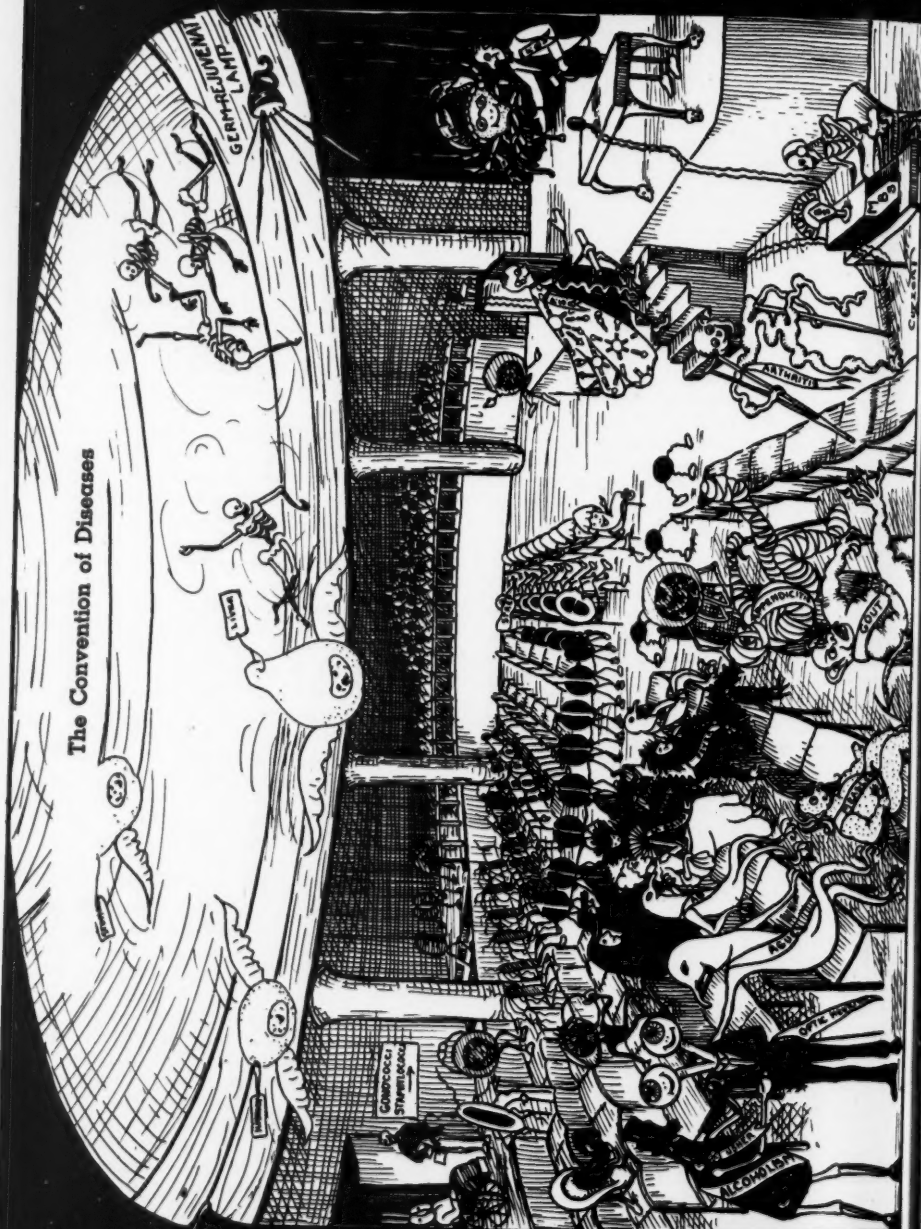
PROCEEDINGS opened with an introductory address by Tuberculosis, F.B.U. (Fellow Bacillary Union). There was a note of pessimism in it. It was sadly admitted that the day had gone by when the head of a great corporation could crowd three thousand people into each acre of its city property and at the same time be president of the Organized Welfare Society. Then the use of the cheap small-film x-ray for the diagnosis of tuberculosis in various population groups and mass preinduction physicals was uncovering 1.3 per cent of the disease in such groups, with more than

half in the minimal stage, which meant in a rather easily curable stage. However, follow-up and adequate treatment for every such case discovered, with all agencies cooperating, had not been fully provided for. So long as prompt treatment of the early cases was not available there was hope that the program of early detection could be stymied. So long as periodic examinations of all those with inactive disease, and isolation of all infective cases, were postponed, a rise in the incidence of the disease could be counted on. There was a ray of hope in the wartime conditions and in the possible lessening of health education not only among the general population but with the patients themselves and their families.

Syphilis, F.S.B. (Fellow Spirochete Brotherhood), looking badly battered, recounted recent alarming experiences with the therapeutic synergism developed by penicillin and the arsenicals, when used conjointly. Syphilis had noted that smaller doses of the arsenicals, conjoined in this way, gained in effectiveness. But there was good cheer in the fact that the use of penicillin in the treatment of gonorrhea was masking syphilis simultaneously acquired. Syphilis regretted to state that as yet no means of penetrating the barrier provided by nature for the protection of the fetus in the first sixteen weeks of pregnancy had been developed; thus it was after the fifth month that fetal infection was common, not before; patrols and even shock troops had been sent into the Langhans cells of the trophoblast but had always returned in a shattered state. Beck and Daily (*Science*, No. 6, 1938) had shown how this fact rationalized the therapy of syphilitic mothers [confirmed by Dippel, *Amer. Jour. Obs. and Gyn.* 47:369 (March) 1944]. Syphilis could not speak optimistically of the future but would continue to carry on in the old fanatical spirit to the end.

Cancer, F.N.R. (Fellow Neoplastic Racketeers) was pleased to report that the lungs were being more and more successfully invaded during the past few years. It had seemed to Cancer that city

The Convention of Diseases



soot, exhaust gases and the tar (benzopyrene) produced by cigarette combustion were at least contributory factors. To be greatly feared was the campaign of the American Cancer Society for research funds (\$2,000,000 for research, \$3,000,000 for education) to insure a sufficiency of funds and continuity in the work, something hitherto inexpedient. Now there is too much chaos, duplication of effort; no over-all planning, and meager short-term grants from the foundations. Should this campaign fail the Government may move in prepared to spend billions in place of the society's millions. The latter would meet with Cancer's hearty approval, for reasons reflected in an address by Dr. Karl T. Compton on the financing of industrial research. Dr. Compton said: "If, however, the whole burden of this support were undertaken by Government, there would be obvious dangers such as allocation for political purposes, or what may be nearly as bad, blindfold distribution in order to escape political influence. There would be risk of lack of continuity and of entrenching another bureaucracy. There would be risk of directing funds toward objectives appealing to the imagination of blocks of voters rather than toward the most fundamental advancement of knowledge." Cancer thought that there was much more to be feared from the individualism now prevailing in this field, even though poorly financed, than from the creatures of another bureaucracy. Finally, Cancer found great satisfaction in the doubling of the death rate from its ravages between 1900 and 1944, with 1944's mortality increased over that of 1943.

THE most gleeful of the participants was Arthritis. Comroe was cited [J.A.M.A. 127:393 (Feb. 17) 1945] to the effect that although there were not more than 200 free beds in the United States for rheumatic patients there were approximately 100,000 free beds for the care of tuberculosis patients, "despite the fact that arthritis and allied conditions

affect more persons in this country than the sum of all patients having tuberculosis, cancer, diabetes and heart disease." It was to be hoped that the suggestion that present army centers be utilized after the war as arthritis centers would be forgotten.

Brucellosis, speaking for the whole class of preventable diseases, thought the immediate outlook fairly good but sounded a note of warning for the future. Much was to be feared from the constantly growing enlightenment of the people and the persistent efforts of medical educators. Much encouragement was to be derived from the activities of such bodies as the antivivisectionists and the steady inroads of freak systems of healing. It would probably be a wise plan for the preventable diseases, instead of working far afield and even indirectly, to concentrate their energies toward "getting" such enemies as the A. M. A. propagandists. Finally, it was to be hoped that the war would present new difficulties for medicine and governments in the way of widely disseminated tropical diseases.

AT this point we began to look around the hall to see if the old syndrome of yesteryear, "A Complication of Diseases," was in attendance. But the meeting suddenly broke up in confusion, due to the unexpected appearance of a body of shoo-fly cops, made up of opsonins and antitoxins. We awoke just in time to catch the last words of the lecturer on penicillin. So the menu which we had read on the Convention's program was not partaken of, to wit:

<i>Ptomaine Cocktails</i>	
<i>Serum, Plain</i>	
<i>Muscae Volitantes</i>	<i>Small Round Cells</i>
<i>Bundle of His, Vitreous Sauce</i>	
<i>Pineal Croquettes</i>	<i>Cilia</i>
<i>Phagocyte Punch</i>	
<i>Agar-Agar Pudding, Albumin Sauce</i>	
<i>Opsonic Ices, all Strains</i>	
<i>Lady Fingers</i>	<i>Casein Nodes</i>
<i>Caffeine Cordial</i>	
<i>A.C.J.</i>	

Luther H. Hodges Named National Chairman of Anti-Leprosy Program

LUTHER H. HODGES, vice-president of Marshall Field and Company, Inc., and general manager of the Manufactur-

ing Division of Marshall Field and Company, Inc., has been named National Chairman of the 5-year Postwar Anti-Leprosy Program to be carried on in eight countries of Asia and Africa by the American Mission to Lepers.

CANCER

*Edited by John Mumford Swan, M.D. (Pennsylvania), F.A.C.P.
Executive Secretary of the New York State Committee of the
American Society for the Control of Cancer, Inc., assisted
by Charles William Hennington, B.S. (Rochester), M.D.
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CARCINOMA OF THE BREAST VII RECURRENCE, OPERABILITY, PROGNOSIS. HEREDITY, PREVENTION.

RECURRENCE. Local recurrence, distinguished from distant metastasis, is thought to be due to the accidental failure to remove all malignant cells during the primary surgical procedure. This failure is scarcely to be wondered at when the size of the individual cell is taken into account. It is in the hope that such cellular remains can be destroyed that postoperative irradiation to the operative field is advocated.

We are in the habit of considering a five year survival after radical mastectomy for carcinoma of the breast the evidence necessary for us to say that the cancer has been cured. However, cases of late recurrence in the operative field are often reported. Haagensen and Stout (10a) say: "Surgeons will do well to bear in mind the fact that the incidence of local recurrence in the field of operation continues to be distressingly high." (22.8 percent in their series of 640 cases.)

Gordon Gordon-Taylor (7) reports nine cases of late recurrence in 603 cases of breast cancer (1.4 percent). One in the pelvis after thirty years, and eight in the scar after six, sixteen, seventeen, twenty-one, twenty-two and twenty-three years respectively. In two cases the time interval was not stated.

Chilko and Quastler (2) report twenty-six cases of recurrence during the first five years after operation: twelve cases during the first year, eight during the second year, one during the third year, four during the fourth year and one during the fifth year.

OPERABILITY AND PROGNOSIS. In this series of studies on carcinoma of the breast frequent use of the term "operable case" has been made.

In 1933 Lee (14) considered a breast cancer operable when the tumor was not fixed to the chest wall, with or without involvement of the axillary lymphnodes. Multiple cutaneous nodules around the original tumor site, swollen or painful arm with extensive axillary invasion, and distant metastases to the chest or to the skeletal system should be considered reasons for calling the case inoperable. He thought that radical surgical procedures upon cases of advanced mammary cancer shorten the life of the patient and are apt to bring discredit on surgery.

Rowntree, (20) in 1937 considered cases in which there is widespread extension of the growth; secondary skin nodules; a nodule outside the breast area; wide ulceration or edema of the skin; involvement of the supraclavicular lymphnodes; distant metastases; bilateral growths; enlarged and fixed axillary lymphnodes; coincident pregnancy and lactation; serious intercurrent disease and extreme old age, when the expectation of life is less than the average duration of the disease, to be inoperable.

KUNATH, (13) in 1940, analyzed 168 cases of breast cancer, treated in the University of Iowa Hospitals (Iowa City) between 1927 and 1932. Of these ninety-one were considered operable (54.1 percent) and fifty-six were considered inoperable when first seen (33.33 percent). One of the patients considered operable refused to accept operation.

Haagensen and Stout, (10a) in 1942, in a study of 1040 cases seen at the Presbyterian Hospital (New York, N. Y.) found that radical mastectomy was done in 640, an absolute operability of 61.5 percent. However, if they deducted those patients lost track of, those in whom treatment was started but not completed, etc., the

"relative operability" was 73.1 percent. They show the importance of calculating operability as well as of five year survivals on the basis of the total number of patients seen. "Only in this way can strictly comparable statistics from different clinics be obtained."

In 1943 the same authors (10b) under the title "criteria of operability" present an exhaustive study of nineteen clinical manifestations and syndromes which are to be taken into account: 1—The age of the patient. 2—Pregnancy and lactation. 3—The site of the carcinoma in the breast. 4—The size of the growth. 5—Multiple tumors in one breast. 6—Local elevation of skin temperature. 7—Redness of the skin. 8—Involvement of the skin. 9—Ulceration of the skin. 10—Edema of the skin. 11—Fixation of the tumor to the chest wall. 12—Satellite tumor nodules in the skin over the breast. 13—Intercostal or parasternal nodules. 14—Massively enlarged axillary nodes. 15—Fixation of axillary lymphnodes. 16—Edema of the arm. 17—Supraclavicular metastases. 18—Inflammatory carcinoma. 19—Distant metastases.

THEY then present a "master table" of cases which are categorically inoperable; 1—Carcinoma developing during pregnancy or lactation. 2—Extensive edema of skin over the breast. 3—Satellite nodules in the skin over the breast. 4—Intercostal or parasternal nodules. 5—Edema of the arm. 6—Proved supraclavicular metastases. 7—Inflammatory type of carcinoma. 8—Distant metastases.

Then there is a group of clinical factors which taken alone do not furnish sufficient evidence to warrant a prognosis definitely grave. 1—A single tumor 10 cm. or more in diameter. 2—Multiple tumors in one breast. 3—Redness of the skin. 4—Skin involvement. 5—Ulceration. 6—Edema of limited extent. 7—Fixation of the tumor to the chest wall. 8—Axillary lymphnodes 2.5 cm. or more in diameter proved to be metastatic. 9—Fixed axillary lymphnodes proved to be metastatic.

The presence of any single one of these clinical factors is not sufficient to contraindicate radical mastectomy. However, syndromes of two or more of these signs, particularly ulceration, edema of limited extent, fixation of the tumor to the chest wall, axillary lymphnodes containing metastatic nodules, either fixed or more than

2.5 cm. in diameter, should weigh against radical surgery.

Finally they make the following statement: "Women of all age groups, who are in good enough general condition to run the risk of major surgery should be treated by radical mastectomy except as follows: 1—When the carcinoma is one which developed during pregnancy or lactation. 2—When extensive edema of the skin over the breast is present. 3—When satellite nodules are present in the skin over the breast. 4—When intercostal or parasternal tumor nodules are present. 5—When there is edema of the arm. 6—When supraclavicular metastases are present. 7—When the carcinoma is of the inflammatory type. 8—When distant metastases are demonstrated. 9—When any two or more of the following signs of locally advanced carcinoma are present: (a) Ulceration of the skin. (b) Edema of the skin of limited extent (less than one-third of the skin over the breast involved). (c) Fixation of the tumor to the chest wall. (d) Axillary lymphnodes measuring 2.5 cm. or more in transverse diameter and proved to contain metastases by biopsy. (e) Fixation of axillary lymphnodes to the skin or the deep structures of the axilla and proved to contain metastases by biopsy.

IF these criteria had actually been followed in judging operability in the series of 640 radical mastectomies which we have reported, a total of 109 of the patients would not have been operated upon. Yet the number of patients permanently cured would not have been decreased by a single one."

They consider irradiation the preferable method of palliative treatment in these incurable cases.

In Lee's (14) cases the prognosis was best when the tumor was situated in the upper, inner segment of the breast; poorest when the growth involved the upper central segment or both lower quadrants. In young women, under 40 years of age, the prognosis was found to be less good than in older women. The disease was found to be more serious in women who have had previously lactating breasts. No patient who was pregnant when the growth was discovered survived the five year period without recurrence.

Harrington (12) considers the degree of malignancy, estimated according to the

method of Broders and the extent of the disease indicated by the presence or absence of lymphatic metastasis, the most valuable prognostic indications. Surgical results are much more satisfactory in cases without than with lymphatic metastases in all grades of malignancy. The survival contrast between grade I and grade IV tumors is striking. In the former 93.1 percent, in the latter, 54.4 percent of the patients lived five years.

Mathews (16) is of the opinion that the grading of breast tumors is of prognostic significance. However, he says that gland involvement is still our most reliable factor in determining the prognosis, which is not very different from saying that the early cases do better than the later ones.

Haagensen (9) studied 164 consecutive cases of breast carcinoma, from the service of Frank S. Mathews at St. Luke's Hospital (New York, N. Y.), from the viewpoint of grading and prognosis. He found that the papillary character of the growth, the comedo character of the cells, adenoid arrangement of the cells, variation in size and shape of the nuclei, the number of mitoses and the presence of gelatinous degeneration were of prognostic significance.

FOR example: papillary adenocarcinoma, arising in a cyst formed from a dilated duct, is considered a benign tumor. Four such cases occurred in this series in all of which the patient was alive and well after five years. Of ten cases of comedo cancer, four were living and well after five years. Of those patients who died before the five year period had been reached, the survival was twice as long as those with other types of carcinoma.

Of seven cases in which the tumor presented a plexiform arrangement, two survived five or more years. Of twenty-two cases of adenocarcinoma twenty survived for five years. He concluded that a marked adenoid arrangement of the growth is a strong indication of a good prognosis.

The prognosis seemed better in cases in which the variation in the size and the shape of the nuclei is slight. As the number of mitoses increased, the malignancy seemed to increase. The size of the tumor cells, hyperchromatism of the nuclei and the presence of vacuoles in the cytoplasm appear to have little prognostic significance.

Involvement of the regional lymphnodes is of bad prognostic significance. But

histologic grading is an additional prognostic guide.

Of 103 tumors in which the grade of malignancy of the metastases was compared with the grade of the primary tumor, the grades corresponded in 71.0 percent. It was higher in the metastases in 19.0 percent, and lower in 10.0 percent.

Evans (5) studied seventy-five cases of breast cancer treated with surgery and short-wave irradiation and concluded that evidence of anaplasia was of no practical importance in determining the results of treatment. However, he thought that a high degree of lymphocytic infiltration appeared to be unfavorable. Nor did he feel that the addition of irradiation to radical surgery altered the factors on which a prognosis could be made.

DAWSON and Tod (4) were of the opinion that the dividing line between a good and a bad prognosis is to be found in the presence (bad) or the absence (good) of regional lymphnode involvement. They were "inclined to oppose the contention that fibrosis is necessarily a favorable factor in the prognosis in mammary cancer." They were inclined to deny a specific function to the lymphocyte found in the histological study of breast cancer and were of the opinion that the accumulation of lymphocytes represented a "response to normal or malignant degeneration or necrosis." They thought that histological grading often failed in accuracy in prognosis because it was so often not correlated with clinical findings.

As a result of their study of forty-three cases of primary breast cancer seen in the Michael Reese Hospital (Chicago) Saphir and Parker (21) concluded that no estimate concerning the length of survival of the patient could be drawn from the microscopic appearance of the primary tumor nor concerning the number of metastases likely to be found. "However, the presence of isolated tumor cells, regardless of the type of carcinoma, separated from primary basic structures of the carcinoma, indicates a high degree of malignancy."

Trout (24a) is of the opinion that the clinical index of malignancy is of more value than histological grading.

Stanton (23) is of the opinion that the prognosis in cancer of the breast is by no means hopeless. In favorable cases post-operative survival without demonstrable recurrence for over twenty years is by no

means uncommon. He believes that "the ultimate prognosis in each case is for the most part determined by factors which, in the present state of our knowledge, may be conceived as the product of the degree of malignancy of the tumor and the resistance inherent in the patient."

Greenough (8) believes that the significant feature in the prognosis of cancer of the breast is to be found in the degree of the extension of the growth when first seen.

In 124 cases studied by Sophian (22) those with axillary metastases showed uniformly poor ten year results. He thought that the invisible extensions of carcinoma at the time of operation are the major controlling factors in the prognosis of the individual case.

HE thought that the histological criteria in grading breast cancers are the size of the nuclei, the degree of variability in the size and shape of the nuclei, the regularity of adenoid cellular grouping, the number of mitotic figures, the presence of papillary formation, the degree of lymphocytic infiltration, the extent and density of fibrosis, the amount of intracellular secretion and the occurrence of comedo formation. In the 124 tumors studied 34.0 percent were grade I; 19.0 percent grade II; and 29.0 percent grade III.

Portmann (19) points out the following clinical signs which indicate an unfavorable prognosis: 1—In the skin; edema, pig-skin or orange skin, brawny red induration and inflammation, multiple nodules and ulceration. 2—In the breast; edema, diffuse infiltration, multiple tumors, fixation to the chest wall. 3—Metastases to distant organs (lungs, skeletal system and other organs), to the supraclavicular lymphnodes, to the axillary lymphnodes, if they are fixed or extensively involved, and incomplete previous surgical procedures. The fact is that the deaths within the first five years occur in those patients in whom metastases have already begun. However, if the metastatic process is confined to a few of the axillary lymphnodes the situation is not hopeless.

From the data in a series of 1565 patients admitted to the Collis P. Huntington Memorial Hospital (Boston) and the Pondville (Mass.) State Hospital, Nathanson and Welch (18) concluded that there is no absolute proof that treatment of carcinoma of the breast has increased life

expectancy significantly in the years 1923 to 1932 compared with that of the years 1912 to 1922.

The mean length of life in the age group below forty is about three years; from forty to sixty about three and one-half years; and after sixty years of age about four years. In hospital cases cancer of the breast is more malignant in the young than in the old. Susceptibility to cancer of the breast increases steadily with age.

Frantz (6) points out that when stained with mucicarmine some sections of breast cancer show cells that stain pink. It has been thought that this staining reaction indicated a favorable prognosis. However, after a study of 130 cases, the author concluded that the staining reaction could be found in tumors of all grades of malignancy.

She says: "No histological character yet found carries nearly the weight in prognosis that is carried by the well known clinical findings such as age, extent of local disease and presence of metastases."

DAVIS (3), after a study of sixty cases of carcinoma of the breast from his and his father's private practice and twenty-three cases from the records of the Hospital of the University of Nebraska, considers the most important factors in determining prognosis are delay in the institution of treatment and the extent of the disease.

Brooks and Daniel (1) are of the opinion that "the extent of the disease as determined at operation or from subsequent study of the gross specimen is far more important in prognosis than any classification of tumors according to 'grades' of malignancy."

Kunath (13) considers the presence of axillary metastases and the rapidity in the increase in the size of the tumor the most important indications on which to base prognostic opinions. "The crux of the problem lies in obtaining a reduction in the large number of tumors which are inoperable when first seen by the surgeon."

Haagensen and Stout (10b) say that involvement of the axillary lymphnodes is probably the most important factor influencing prognosis. In their cases 61.0 percent five year clinical cures were obtained in patients in whom the disease was limited to the breast and in only 21.0 percent of those with axillary metastases.

HEREDITY. Trout (24b) is of the opinion that heredity plays an important role in malignancy.

Martynova (15) found from a study of the family histories of 201 patients with cancer of the breast that the incidence of cancer among their relatives was much higher than in the control population of the same age. In the former group 7.28 percent of the relatives were afflicted with cancer. In the latter 2.61 percent. "This high familial incidence of cancer in all categories of relatives speaks against its chance occurrence and indicates that hereditary factors play a definite role in the etiology of the disease."

Munford and Linder (17) reported an instance of cancer of the breast in homologous twins, aged 91 years. The growth occurred in the left breasts of both. One was diagnosed histologically carcinoma with mucoid degeneration of the connective tissue between the cords of tumor cells. There was no histological report in the other twin.

In these women there seemed to be evidence of heredity on the female side. The maternal grandmother and a maternal aunt died of cancer of the left breast. There was no history of cancer on the paternal side. The patients had three brothers and two sisters none of whom had cancer.

Handley (11) reports the cancer record of a family in which the mother died of cancer of the liver at the age of 69 and the maternal grandmother of abdominal cancer (probably gastric) at the age of 37. The mother had five daughters. The oldest was born in 1871 and had a radical mastectomy for cancer at 48. Eleven years later she had symptoms suggesting gastric cancer from which she died. Neither of these growths was examined

histologically. The second daughter was born in 1875. She had a right radical mastectomy at 50 (1925) followed by irradiation and in 1937 a left radical mastectomy. Both confirmed microscopically. The third daughter was born in 1879 and at 51 (1930) had a simple mastectomy for chronic mastitis of the left breast. Three years later she had a simple mastectomy for proliferative mastitis and "incipient carcinoma" of the right breast. The fourth daughter was born in 1885. At the age of 44 (1929) she was treated with x-irradiation for "mastitic induration" of the left breast and in 1930 treatment with "surface radium" for mastitic induration of the right breast. The fifth daughter was born in 1886. At the age of 37 years (1923) she had a radical mastectomy for primary carcinoma of the left breast and in 1927 a radical mastectomy for carcinoma of the right breast. Five years after the second operation this patient died from recurrence in the supraclavicular lymphnodes and the skeletal system.

PREVENTION. Trout (24a) recommends the following routine for the prevention of cancer of the breast. 1—The education of mothers concerning the necessity of nursing their babies until the breast has been relieved of all products of stagnation. 2—If there is any real reason for weaning an infant early the breast pump should be employed until all signs of retention have been removed. 3—Careful attention to the hygiene of the nipples. 4—The correction of pelvic disorders, particularly when there is pain in either breast during menstruation. 5—Since two-thirds of all breast cancers are found in the upper quadrants, the breasts should always be properly supported by brassieres that relieve the down drag. 6—After radical mastectomy for breast cancer future pregnancies should be avoided.

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—Concluded on page 183

CONTEMPORARY PROGRESS

GYNECOLOGY

Conization and Early Diagnosis of Carcinoma of the Cervix

J. J. Haber (*American Journal of Surgery*, 67:68, Jan. 1945) reports that conization of the cervix has been done in 311 cases at the Charleston (W. Va.) General Hospital between July 1942 and October 1944. The electrosurgical unit loop is employed for this procedure, the size of the loop varying according to the size of the cervix and the type of conization indicated. If bleeding occurs during conization, sutures are not employed, but fulguration of the bleeding points is done. If the cervical lesions are superficial or for biopsy purposes, slight or moderate conization is done. If edematous chronic cystic cervicitis is present or if amputation of the cervix, Sturmdorff's operation and trachelorrhaphy have been done, radical conization is indicated. Slight or moderate conization is done without anesthesia and the patient is allowed to go home the same day. For radical conization, general anesthesia is necessary, preferably sodium pentothal and oxygen; and the patient is hospitalized for about three days. It has been found that the best time for conization is immediately after a menstrual period. If conization is done before a menstrual period, or even between periods, it may cause an increased menstrual flow and bleeding from the conized area which is macerated by the menstrual flow. The patient is instructed to avoid intercourse for four weeks after conization, to take daily sitz baths, and not to be alarmed "by moderate vaginal bleeding," which may occur when the necrotic layer of tissue begins to separate. The slough has usually disappeared within three to six weeks; there is very little scar tissue; and the cervix has the appearance of a nulliparous cervix. In the series of cases reported conization has had no more harmful after-effects even in

superficial lesions than simpler office procedures. With the technique used, by employing high current very thin layers of tissue can be obtained for biopsy. In the presence of lesions that are recognized as being predisposing factors in the development of carcinoma of the cervix, such as chronic inflammatory lesions, lacerations from childbirth and erosions, early carcinoma can be easily overlooked without conization and biopsy. In the 311 cases in which conization was done, there were 18 cases of carcinoma of the cervix, and in 4 of these the carcinoma was diagnosed by means of conization. There were 11 cases in which biopsy showed squamous cell metaplasia; these patients were urged to return for repeated check-ups, but repeated biopsies have been made on only 2 of these patients and did not show malignancy in either case.

COMMENT

Conization of the cervix is a good and efficient office procedure in certain types of cervixes. We do not believe it can take the place of the Sturmdorff operation or amputation in the deeply infected, edematous, lacerated, cystic cervix of long standing. In these latter cases conization carries too many hazards (bleeding, massive slough, stenosis, etc.) and it is not a "clean" surgical procedure. We have performed hundreds of Sturmdorff operations, leaving a cervix that appears nulliparous and one that will dilate during labor. We have tabulated 294 such cases (covering 20 years) followed through pregnancy and found no greater incidence of cervical dystocia than in non-operated cases. The early diagnosis of carcinoma of the cervix by radical conization has no advantage over biopsy performed by any other method. We use the electrosurgical loop for performing biopsy when indicated and conization in the office without anesthesia but we certainly would not amputate a cervix (under anesthesia) by conization. When conization becomes radical it is not "surgical".

H.B.M.

Vaginitis Treated With An Antiseptic Buffered Acid Jelly

J. C. Brougner (*American Journal of Obstetrics and Gynecology*, 48:523, Oct. 1944) reports the treatment of various types of vaginitis in 145 patients by the application of a buffered acid jelly. The normal reaction of the vagina is acid with a pH between 4.0 and 5.0, which is an "unsuitable environment" for pathogenic organisms. This reaction depends upon the glycogen content of the vaginal cells, which in turn depends upon the estrogenic level; Döderlein's bacilli utilize the glycogen to form acid which maintains the acid reaction. In children and after the menopause when the production of estrogen is at a low level, the glycogen content of the vaginal cells is also low and the reaction of the vagina becomes alkaline. The jelly employed in the cases reported consists of hexylresorcinol 1:1000 in a base buffered to a pH of 2.0 or less ("Caprokol" jelly). It is applied by

means of a glass rod, which is boiled or cleansed with rubbing alcohol before each application. The patient is instructed to install the jelly into the vagina twice daily, morning and evening, on beginning treatment; each application requires approximately 5 cc. of the jelly. Improvement is rapid, and within one or two weeks, one application daily is sufficient. The jelly has been used by pregnant women as early as the second month of pregnancy and as late as the eighth month. The treatment proved effective in various types of vaginal infections, including *Trichomonas vaginalis* infections and antepartum and postpartum infections, and in cervical erosions. Many of the women

who had previously used various douches, powders and other applications stated that the jelly was easier to use and gave the most rapid relief. Reinfection has occurred in some instances and has been treated by further applications of the jelly. No signs of toxicity or of any untoward reaction have been observed.

COMMENT

There is no question regarding the efficiency of a properly buffered acid jelly in the treatment of various types of vaginitis. Its rationale is reasonable and clinical results are good. The technic and particular jelly that the author recommends we have not used ("Caprokol" jelly). However, we have had some limited experience with caprokol as a germicidal agent and found it very satisfactory. Recurrences are common (especially *Trichomonas vaginalis*) with all methods we have employed and the caprokol method is probably no exception. Don't get discouraged; repeat the treatment. Remember, also, that the estrogens are indicated in certain types of vaginitis in addition to vaginal jelly.

H.B.M.

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The Minimal Histological Changes in Biopsies to Justify a Diagnosis of Cervical Cancer

R. W. TELINDE and G. GALVIN (*American Journal of Obstetrics and Gynecology*, 48:774, Dec. 1944) report a series of 11 cases in which hysterectomy was done on indications other than the cervical lesion. One or two biopsies of the cervix had been made in each instance; in approximately half the cases "several well-trained gynecologists" were unwilling to make a diagnosis of cancer from the biopsy specimens, and the authors themselves were doubtful as to "the true malignant nature" of some of these le-

sions. Yet in 10 of these 11 cases careful histological examination of the cervix, which was cut into blocks, showed definite evidence of invasive carcinoma. In the 11th case, the only area of invasion found was in the biopsy specimen, but the cervix showed extensive changes in the surface epithelium such as were found in the biopsy specimens of the other cases. Later hysterectomy was done in 5 other cases with early microscopic carcinoma. From a study of this material, the authors conclude that the "abnormal cellular activity" that eventually results in cancer of the cervix begins in the basal cells of the surface epithelium; when this abnormal basal cell hyperactivity takes over the full thickness of the epithelium, invasion of the subepithelial tissue is the next step. The question of how long the epithelial changes may persist before actual invasion begins or whether such invasion results in all cases is a question of both scientific interest and clinical importance. During the past eleven months, all cervixes removed by total hysterectomy have been cut into blocks and examined histologically; in 240 cases, extremely early invasive carcinoma was discovered in 2 instances, although no evidence of cancer was found on cervical inspection and/or biopsy. In the treatment of carcinoma of the cervix in which the lesion is of macroscopic size, the authors advocate a full course of radium and x-ray treatment. But in very early microscopic lesions, they consider hysterectomy is the treatment of choice; in these cases if the patient is in the younger age group, they believe conservation of one ovary is permissible. In these cases they have modified the Wertheim technique of hysterectomy; dissection of the ureters is not done. After hysterectomy patients must be followed up with care.

COMMENT

The authors have attempted to present the earliest minimal histological changes in biopsies to justify a diagnosis of cervical cancer. Of course, every clinician is dependent upon his pathologist to tell him just this but some of us are not associated with a pathologist who is so deeply interested. Indeed, if he were, he has not the time nor the help to be able to give us this information. Would that such highly specialized information could be made generally available. What a boon to the cancer patient! For then we could surely cure—and I mean cure—a much greater per-

centage of cervical cancers than we are now able to accomplish. This is truly early diagnosis; the only means we have today of curing cancer—particularly cervical cancer. Let us have more general interest in early cancer. To accomplish this let every physician everywhere become "cancer-minded"—i.e., always on the alert for cancer.

H.B.M.

Ovarian Fibromas and Theca Cell Tumors; Report of 78 Cases With Special Reference to Production of Ascites and Hydrothorax (Meigs' Syndrome)

I. C. RUBIN, J. NOVAK and J. J. SQUIRE (*American Journal of Obstetrics and Gynecology*, 48:601, Nov. 1944) report 78 cases of ovarian fibroma and theca-cell tumor seen at the Mount Sinai Hospital, New York, from 1928 to 1943 (inclusive). From 1928 to 1936 (inclusive), no distinction was made between fibroma and theca-cell tumor. In this period 23 of the 78 cases were observed; ascites was present in 9 of these cases; in 6 of these cases with ascites, the tumor was of large size, in 3 of medium size. In 7 of the 9 cases with ascites, the tumor was edematous and usually cystic; in 2 cases hemorrhagic. Hydrothorax was also present in one case. In the cases observed after 1936, there were 30 fibromas (including fibromyomas), 2 papillary fibroadenomas, and 23 theca-cell tumors. There was a small amount of ascites in only 2 of the fibroma cases and in one of the 2 cases of fibro-adenoma (ascites fluid found at operation.) Hydrothorax was not present in any of these cases. In the 23 cases of theca-cell tumor, ascites was present in 7 cases; in 3 the abdominal effusion was extensive and the tumor large; there was an associated hydrothorax in one case. In 4 cases the ascitic fluid was of moderate amount and the tumor of medium size. In 6 of the cases with ascites the tumor was edematous and in 4 cystic. From their study of these cases, a review of the literature and animal experiments, the authors conclude that the ascites occurring in ovarian fibromas and theca-cell tumors probably originates from the tumor itself. In a further study of this problem, conditions that may cause lymph congestion in the tumor should be investigated; and in every case of Meigs' syndrome, the specific gravity, albumin and cell content and the osmotic pressure of the

ascitic and pleural effusions should be determined. A preponderance of right-sided pleural effusion has been observed in cases of Meigs' syndrome. This is explained as due to the better development of diaphragmatic lymph channels, the higher position of the diaphragmatic dome and the more intensive pumping action of the diaphragm on the right side.

COMMENT

For many years (1879), non-malignant solid tumors of the ovary were known to produce ascites associated occasionally with hydrothorax. However, it was not until Meigs and Coss of Boston in 1936 pointed out their clinical importance that any particular atten-

tion was paid to this rather strange and unusual phenomenon. It has since been known as Meigs' syndrome. There have been many theories to explain why a given fibroid or theca cell tumor of the ovary will produce ascites and/or hydrothorax in one case and not in another. No explanation has been entirely satisfactory. Why is the hydrothorax more common on the right side? It is truly a fascinating story and good reading for those who are interested. We have never encountered Meigs' syndrome, although our operating experience extends over a period of 25 years. The authors are to be congratulated on their excellent presentation, made possible by good histories and an excellent pathological laboratory. More of us would do well to follow their example.

H.B.M.

OBSTETRICS

The Effect of Continuous Caudal Analgesia Upon Uterine Motility During Labor

D. S. FRANKEL (*Surgery, Gynecology and Obstetrics*, 80:66, Jan. 1945) reports a study of uterine motility during labor with the Lóránd tocograph, in 50 patients delivered under continuous caudal analgesia. The closed circuit needle technique of Hingson and Edwards was employed for the caudal analgesia, and metycaine 1.5 per cent in Ringer's solution was used as the anesthetic agent. Uterine contractions were recorded by the tocograph for a control period of fifteen minutes before the analgesic dose of metycaine was given, and then for an hour or more after complete analgesia was obtained. The level of analgesia was carefully checked in each case; it was considered to be high if it went to the 4th thoracic segment or above. In 33 of the 50 patients studied, there was no significant change in either the strength or the frequency of uterine contractions under caudal analgesia. In 9 patients the contractions were interrupted for periods of thirty minutes to two hours; in 6 patients there was a decrease in the frequency of contractions, and in one a noticeable decrease in the strength of contractions. Two patients showed "significant improvement" in both the strength and frequency of the contractions. An analysis of these cases shows that the height of the analgesic level was the most important factor in influencing

the uterine contractions under caudal analgesia. In all the cases in which labor was interrupted, the analgesic level was above the 4th thoracic segment; when the analgesic level was allowed to fall, labor started again. In the 2 cases in which contractions increased in strength, the analgesia involved the sacral segments only; these patients complained that their pains were made worse. When the analgesic level was raised above the 11th thoracic segment, the pain was relieved, but "the stronger pattern" of contractions persisted. In 4 cases labor was not interrupted, although the analgesic level was above the 4th thoracic segment. In 35 cases, the analgesic level was between the 6th and 7th thoracic segments; 7 of these showed minor changes in the strength or frequency of contractions, which did not appreciably lengthen the duration of labor. These findings "would seem to indicate" that the motor fibers to the uterus leave the cord above the 4th thoracic segment. In 27 of the 50 patients there was no change in uterine tone during caudal analgesia; 22 showed a progressive decrease in tone, and one a marked rise in tone. This decrease in tone does not appear to be equivalent to the uterine relaxation produced by deep ether or chloroform anesthesia; and it could not be related to the level of analgesia.

COMMENT

There is no panacea for the relief of pain during childbirth. Caudal anesthesia, like so many other similar methods, is good but, under existing conditions, there are many draw-

backs to its use—mainly those of technic and personnel. Generally speaking, it does not decrease the intensity or frequency of uterine contractions—and, in some cases, the reverse is true—yet, as the author shows, the height of the analgesic level does influence uterine contractions in a few cases. By and large, in our experience, uterine contractions are not interfered with and in quite a few cases they appear to be stronger but not more frequent. But, don't forget, the "personality" of the patient is always a prime consideration and we believe it is very difficult to appraise any obstetric analgesic or anesthetic with absolute accuracy. There will always be "differences" no matter which agent is employed.

H.B.M.

An Analysis of 101 Fatalities from Ectopic Pregnancy

P. F. WILLIAMS and J. D. CORBIT (*American Journal of Obstetrics and Gynecology*, 48:841, Dec. 1944) present a study of 101 fatalities from ectopic pregnancy recorded in Philadelphia from 1931 to 1943. These deaths occurred in 2,204 ectopic pregnancies, a mortality of 4.6 per cent for the entire series. During the period studied, there was a definite reduction in mortality from ectopic pregnancy; in the first six years it was 5.6 per cent; in the next seven years 3.5 per cent; in the last two years, 2.2 per cent. An investigation of the responsibility for these deaths has been made by the Maternal Welfare Committee of the Philadelphia County Medical Society in a careful review of the history of each case. In 13 cases the death was regarded as unavoidable, because the condition was promptly diagnosed and promptly treated by adequate surgery and transfusion; in some of these cases complications of a medical nature were the cause of death. In some cases the patient was found to be responsible because of delay in seeking medical advice, attempted abortion, or incorrect history. In some cases, the responsibility was divided between the patient and the referring physician, the latter making an incorrect diagnosis or delaying in referring the patient to the hospital. In other cases the responsibility for death was placed wholly or partly on the hospital chief. In such cases, failure of correct diagnosis, unexplained delay in operation, inadequate surgery, and failure to treat shock after operation, chiefly lack of transfusion, were found to be the chief factors in the fatality.

MEDICAL TIMES, JUNE, 1945

COMMENT

Ectopic gestation is still the enigma of the gynecologist. There is no other condition in gynecology that is more difficult of diagnosis. This being true, general practitioner and specialist should become "ectopic-minded" and, when there is the least suspicion of ectopic pregnancy, a very thorough and painstaking history and physical examination should be carried out. "If uncertain, seek consultation in a good hospital" is a good axiom to remember. When the diagnosis is made, operation is indicated. If shock be present, treat it before operation. As the author points out, the responsibility for continued poor results in the management of ectopic pregnancy is due to a multiplicity of errors "on the part of patient and physician" but mostly on the part of the physician. Better become "ectopic-minded"!

H.B.M.

An Antepartum Study of Fetal Polarity and Rotation

A. I. WEISMAN (*American Journal of Obstetrics and Gynecology*, 48:550, Oct. 1944) reports a study of the polarity of the fetus in 100 unselected primiparas. The usual palpatory methods and x-ray visualization of the fetus were employed. The first x-ray studies were made at about the fifth month of pregnancy (18th to 22nd week); the seventh month (28th to 30th week), the eighth month (32nd to 34th week) and approximately "a week or so" prior to the expected date of delivery. In 74 cases the fetus was in cephalic presentation at the time of the first x-ray visualization, at about the fifth month; no change in presentation occurred in any of these cases. In 26 cases the fetus was not in normal polarity at the time of the first x-ray study. In 2 of these cases the presentation was transverse at this time; rotation to vertex presentation occurred in both of these cases by the end of the seventh month. In 24 cases the presentation was breech at the first examination; rotation to vertex presentation occurred in 16 of these cases by the end of the seventh month; and at the end of the eighth month, rotation to vertex presentation had occurred in one other case. In 6 of the 7 cases remaining in breech presentation, external version was performed successfully, and vertex presentation was maintained until delivery. In the one case remaining in breech presentation, delivery was by elective cesarean section one week before term, because of a cervi-

cal fibroid "blocking the passageway." These studies indicate that up to one month before term most transverse and breech presentations will rotate spontaneously to normal presentation. If at the end of the eighth month of pregnancy, the fetus remains in breech presentation and deep in the pelvis, external version should be attempted.

COMMENT

The relatively low incidence of breech presentation at or near term substantiates the author's conclusion—i.e., that most breeches become vertexes. We heartily agree that those breech presentations that do not spontaneously rotate by the 32nd to 40th week should be "turned" by external version. Of course, there will be failure (10-30 per cent) depending upon the experience of the accoucheur. Keep trying. External version requires the complete confidence of the patient and gentle but determined manipulation. Relaxation is a prerequisite. Never attempt external version under anesthesia or when labor has begun.

H.B.M.

Application of Braxton Hicks Version in Modern Obstetrics

D. E. REID and M. E. AABERG (*American Journal of Obstetrics and Gynecology*, 48:630, Nov. 1944) report the employment of Braxton Hicks versions in 110 cases at the Boston Lying-In Hospital in 1930 to 1942, inclusive. Twenty-two patients (20 per cent) were febrile after delivery; and there were 2 maternal deaths in this series. The method was used in 51 cases of antepartum bleeding, 35 cases of placenta previa and 10 cases of premature separation of the placenta; 8 of these were complete placenta previa. It was also used in 28 cases of severe pre-eclampsia and 7 cases of eclampsia; and in 10 cases of transverse presentation. In some of these cases, and especially in cases of toxemia, when the cervix was not sufficiently dilated for immediate Braxton-Hicks version, a small Voorhees' bag was inserted. If the bag is used care is taken not to rupture the membranes when the bag is introduced. The fetus is converted into a breech presentation by external podalic version, usually following insertion of the bag. When the bag is removed and the fetus is presenting by the breech, simple rupture of the membranes will usually permit the infant's feet to drop so that a foot can be easily extracted. The gross fetal mortality

was 78.9 per cent; excluding 5 cases in which the infant was dead on admission to the hospital and 8 cases of fetal monstrosities, the corrected fetal mortality was 72.7 per cent. The authors consider that this "salvage" is good, since Braxton-Hicks version is not done in the interest of the baby except in transverse presentations. They recommend the use of Braxton-Hicks version in placenta previa (marginal and partial) when the infant has little chance of survival; in pre-eclampsia when the infant has little chance of survival or is "very premature," and in eclampsia "regardless of the infant's condition," unless there is cephalopelvic disproportion; also in transverse presentations, particularly in multiparas who have living children; and in hydramnios with fetal monstrosities.

COMMENT

The application of Braxton Hicks version in modern obstetrics is extremely limited. Any obstetric procedure with a 20 per cent morbidity for the mother and a fetal mortality of 72 per cent is to be looked upon with grave apprehension. We have never liked Braxton Hicks version because of the above facts, preferring the Voorhees' bag in all similar cases where the fetus is viable. Naturally, if there are no bags to be had, then the baby must be sacrificed to save the mother by performing Braxton Hicks version. But is this good obstetrics? Today, when the vast majority of deliveries are done in hospitals, we believe that Braxton Hicks version is an obsolete procedure, where a viable fetus is present. When the fetus is non-viable it makes little difference which method is used. The Voorhees' bag, when properly used, will accomplish everything that Braxton Hicks version will and, in my opinion, is much safer for both mother and baby.

H.B.M.

Premature Birth: Analysis of 1000 Cases

S. C. SANDIFER (*Journal of Obstetrics and Gynaecology of the British Empire*, 51:408, Oct. 1944) presents a study of 1000 cases of premature birth at Queen Charlotte's Maternity Hospital of London; this represents an incidence of 9.11 per cent of all deliveries at the Hospital in the same period. The incidence of premature deliveries varied from 6.78 per cent in the "booked" deliveries, which involved full antenatal supervision, to 27.2 per cent in "emergency" deliveries. Labor was induced prematurely in 319, or 31.9 per cent of the total premature births; labor was induced in 190 of the premature

deliveries in the "booked" cases. Excluding these induced cases, the premature birthrate in the "booked" cases is 5.13 per cent. The chief causes for premature induction of labor were toxemia of pregnancy or eclampsia, placenta previa, accidental antepartum hemorrhage, disproportion and fetal abnormality. In 309 cases of spontaneous premature delivery, there was some definite cause for the prematurity; the chief cause was multiple

pregnancy; other causes included toxemia or eclampsia, fetal abnormality, accidental antepartum hemorrhage and placenta previa. Of 1000 infants delivered prematurely 252 were stillborn, 144 died in the hospital and 604 were discharged alive; none of infants weighing under 2 pounds survived; the lowest mortality rate was observed in infants weighing $4\frac{1}{2}$ to $5\frac{1}{2}$ pounds.

RHINOLARYNGOLOGY

Acute Nasal Accessory Sinusitis Complicated by Purulent Meningitis: Recovery

EVAN EBERT (*Archives of Otolaryngology*, 41:48, Jan. 1945) reports 2 cases in which the symptoms of sinusitis were slight, but the meningitis was of a severe type and was first diagnosed as epidemic cerebrospinal meningitis. Both of these cases were seen by the author when he was associated with a department of epidemic diseases in a hospital for a short period, the first in 1929, the second in 1943. In both cases there was a history of head cold about a week previous to the onset of symptoms of meningitis; in one case the head cold had caused an unusual degree of nasal obstruction. In both cases lumbar puncture showed a cloudy fluid under increased culture, but no microorganisms. In both cases examination of the nose showed the nasal mucosa to be reddened and swollen, with some "stringy" purulent secretion but no pus. Puncture and flushing of the maxillary sinuses removed pus; treatment was continued until clear fluid was flushed from the sinuses. Both patients showed prompt improvement and made a good recovery. The first case was treated before the sulfa drugs were known. In the second case, sulfapyridine was given, but in such small dosage (a total dosage of 20.5 gm. in eleven days) that it apparently did not play an important role in the patient's recovery. In both cases, the sinusitis was not of a "violent" purulent type, but was an insidious and apparently "innocent" inflammation of the nasal cavities and accessory sinuses. Intracranial complications of sinusitis are rarely reported by otorhinologists. Cases of the type re-

ported by the author, in which the symptoms of meningitis predominate and the sinusitis is easily overlooked, are rarely referred to the otorhinologist. In the hospitals in which the 2 cases reported were observed, the otorhinologists are consulted in every case in which it is suspected that meningitis may be secondary to infection of the ears or nose. It was in this way that the true focus of infection was discovered in these cases and the infected sinuses adequately drained, which undoubtedly saved the lives of these patients.

COMMENT

Acute respiratory infections rather frequently precede nonspecific meningitis. Local treatment is certainly very beneficial where it is indicated.

L.C.McH.

Bipolar Tonsillectomy

E. P. SHEPARD (*Annals of Otolaryngology & Rhinology*, 53:759, Dec. 1944) describes a method of tonsillectomy by dissection designed to leave a smooth appearance of the capsule at the lower pole similar to that obtained by removal of the tonsils with an automatic instrument in children. For this operation in adults premedication with nembutal and morphine and scopolamine is employed, followed by local infiltration anesthesia; the pharyngeal mucosa is anesthetized to abolish the gag reflex. Deep infiltration is obtained by using a curved tonsil needle and going mediolaterally behind the tonsil and close to its pseudo-capsule at the tonsillar equator. The incision of the mucosa is carried from near the lower end of the anterior pillar upwards along the free margin of the anterior pillar back and around the edge of the plica

semilunaris and down the posterior pillar; care is taken to incise only through the mucosa. The opposite tonsil incision is made in the same manner. The tonsil is then grasped with the forceps, and the Marschik dissector used to expose the pseudo-capsule of the upper pole; the pseudo-capsule is white and glistening and usually smooth, and must be carefully identified; the dissection is carried along its dorsolateral surface. A long-handled Allis clamp is used to grasp the capsule to secure added traction. To dissect the tonsil from the fossa, scissors applied very closely to the pseudo-capsule are employed. When the dissection of the upper pole is complete, the Allis clamp is removed; the mucosa incision of the anterior pillar is carried down to, or near, the attachment of the pillar to the base of the tongue. The Allis clamp is then used to grasp the anterior portion of the pseudo-capsule of the inferior pole, which is really the fibrous layer of the plica triangularis. The dissection of the inferior pole is carried out in much the same manner as that of the upper pole. The mucous membrane layer of the plica triangularis is removed, severing it at its base with a cut of the scissors. The removal of the tonsil is usually completed by the use of the snare. Bleeding is first controlled with the use of the hemostat, then by suturing bleeding vessels with No. 00 plain gut, using a pliable curved eyeless cutting needle. This method of tonsillectomy is governed largely by the anatomy of the tonsillo-pharyngeus muscle.

COMMENT

We certainly agree that the lymph follicles in the plica at the lower pole of the tonsils should be removed. The author's technique obviously is good. So is any other technique that does a complete operation without undue trauma to the tissue remaining in the throat. Any surgical technique should, of course, be devised on an anatomical basis.

L.C.McH.

Carcinoma of the Larynx

F. L. LEJEUNE (*New Orleans Medical and Surgical Journal*, 97:298, Jan. 1945) considers that 85 per cent of cancers of the larynx are of the intrinsic type. If operation is done early in this type, the prognosis is good, but fully 40 per cent of patients with cancer of the larynx show lesions too advanced for successful oper-

ation when they first consult the laryngologist. It should be remembered that intrinsic cancer of the larynx does not cause pain or discomfort of any kind in its earlier stages. But it does cause an alteration of the voice recognized as hoarseness, "practically with its inception. Extrinsic carcinomas of the larynx, play an important role in the recognition and control of intrinsic cancer of the larynx by sending every patient who shows a persistent hoarseness to a laryngologist for thorough laryngeal examination. Extrinsic carcinomas of the larynx, occurring on the aryepiglottic folds or external rim of the larynx, do not cause hoarseness or any other symptom in their earliest stages. Local discomfort or pain on deglutition is usually the first symptom, but does not occur "until rather late." The prognosis in extrinsic cancer of the larynx is therefore unfavorable, as is generally recognized. In very early cases of intrinsic cancer of the larynx in which the lesion is small and confined to a small portion of the surface of one vocal chord, intralaryngeal excision of the growth with wide margins of normal tissue gives good results. In a second group of cases in which the growth is larger, but still not sufficiently extensive to require total laryngectomy, the operation of laryngofissure gives good results. The "ideal" case for laryngofissure is one in which the lesion involves only the middle portion of the cord. In the author's experience more and more cases are being seen which are suitable for laryngofissure and the results being obtained with this operation warrant its continued use. In a third group of cases in which the lesion is too extensive for laryngofissure, but is still confined within the cartilaginous structure of the larynx, total laryngectomy is indicated. For this operation, the author uses the mid-line incision extending from above the hyoid bone to the suprasternal notch. He has found that this type of incision expedites healing so that the feeding tube can be removed and patients may be out of bed by the fifth day. Also he usually gives the patient a short period of training, in the development of the esophageal voice before operation, as this shortens the period necessary for the development of a satisfactory voice after operation. He has found that with this method the quality of the voice is usually excellent, and that this is preferable to the use of an artificial

larynx. The author has done 81 laryngectomies with no mortality. There have been some recurrences, chiefly cervical metastases, but 85 per cent of the patients are living and well. In the group of cases in which the lesion is too far advanced for radical operation, including extrinsic carcinomas, radiotherapy is indicated, although it is, as a rule, only palliative. However, some results have been reported in properly selected cases which indicate that radiotherapy should be given "serious consideration" in the treatment of certain cases of cancer of the larynx.

COMMENT

A comprehensive discussion of a serious problem by one of the foremost workers in this field.

L.C.McH.

Acute Pharyngitis Due to Decompensation of the Circulatory System

G. R. LAUB (*Southern Medical Journal*, 37:627, Nov. 1944) has found that in some patients with sore throat, examination shows no signs of acute infection, and although the onset of the throat symptoms may have been acute, the mucous mem-

brane of the throat shows only a slight cyanosis. Occasionally there may be an enlargement of the veins under the tongue and in the throat. A careful general examination of such patients, however, may show "a very early stage of decompensation of the circulatory system." Treatment of the circulatory condition results in relief of the sore throat, usually within two or three days. Three illustrative cases are reported and the author states that he has seen "quite a few cases" of this type, although it is difficult to collect any large number of cases of this type, as patients with beginning decompensation do not come to hospitals. The condition of such patients may, however, be "aggravated enough" by the throat symptoms to lead to consultation with a physician, and if so, they should be given the benefit of a good general examination.

COMMENT

We have often found systemic conditions causing throat symptoms in a patient without objective evidence of throat infection. A thorough general examination should reveal such systemic conditions.

L.C.McH.



CANCER

—Concluded from page 174

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Post-War Pyrethrum Supply

WITH one of the largest pyrethrum crops in the history of Kenya Colony, East Africa, now being released into war channels, plans are under way for more intensive peace-time cultivation of

the daisy-type flower which is the source of pyrethrin, base of most of the effective pre-war insecticides made in America, it is announced by George E. Nixon, on behalf of the Kenya Farmer's Association Co-operative, Ltd.

Medical BOOK NEWS



SAMUEL BARD
1742-1821

Classical Quotations

● By taking it (the womb) in the hollow of the hand, compressing it moderately, raising it towards its natural position, and at the same time rubbing the surface briskly with the hand, she (the midwife) will soon perceive the womb to contract in size, and to assume the form of a ball of considerable firmness; after this, a very few pains will probably deliver the placenta.

SAMUEL BARD

Compendium of the Theory and Practice of Midwifery, containing Practical Instructions for the Management of Women, during Pregnancy, in Labour and in Child-bed. 1807. (First work on obstetrics published in America.)

A New Pathology

A Textbook of Pathology. Pathologic Anatomy in its Relation to the Causes, Pathogenesis, and Clinical Manifestations of Disease. By Robert Allan Moore. Philadelphia, W. B. Saunders Co., [c. 1944]. 1338 pages, illustrated. 8vo. Cloth, \$10.00.

THIS new textbook on pathology is an up-to-the-minute compendium of disease states. As viewed from the aspect of morphological and functional change, it is encyclopedic in its scope and by virtue of the extent of the field covered it suffers of necessity from too great brevity in places.

The arrangement of the subject matter, with a stress on clinical-pathologic correlation, makes the book unusually useful both for the medical student and general practitioner. One striking feature of the text is its richness in reference matter, each chapter being provided with the source of material therein, much of which fortunately, covers the recent current medical literature.

The illustrations are of a high quality. The color plates are unusually well produced and serve to illustrate the text in

Edited by

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places where the ordinary black and white photographs would be inadequate.

The book shows painstaking effort on the part of the author to achieve completeness and as much detail as is possible in a one-volume edition. It can be highly recommended to anyone interested in the study of pathology.

T. J. CURPHEY

Neuropsychiatry

Foundations of Neuro-Psychiatry. By Stanley Cobb, M.D. 3rd Revised and Enlarged edition of the work formerly known as *A Preface to Nervous Disease*. Baltimore, The Williams & Wilkins Co., [c. 1944]. 252 pages, illustrated. 8vo. Cloth, \$2.50.

THE title comprehends the nature of the subject matter of the book. It deals with fundamental problems, a knowledge of which is important to a proper understanding of neuropsychiatry. The book proceeds logically from the normal to the abnormal. Beginning with the anatomy and physiology it takes up neuropathology and psychopathology and then discusses briefly the outstanding neuropsychiatric conditions. An attempt is made to correlate symptoms with underlying pathology. It should be an aid to students and practitioners who are endeavoring to get a thorough grounding in neuropsychiatry.

ARTHUR E. SOPER

Problem of Abortion

The Abortion Problem. Proceedings of the Conference Held Under the Auspices of the National Committee on Maternal Health, Inc. at the New York Academy of Medicine June 19th and 20th, 1942. Editorial Committee, Earl T. Engle, Ph.D., and others. Baltimore, Williams & Wilkins Co., [c. 1944]. 8vo. 182 pages, illustrated. Cloth, \$2.50.

IN this small volume, the abortion problem is discussed under its many headings.

Opinions of physicians, social workers, the Church, and members of the bar are given.

Although no solution is offered, the problem is freely discussed. Further meetings are recommended in the attempt to arrive at some favorable solution.

SANFORD KAMINSTER